

SOV/65-58-11-9/15

Characteristics of Behaviour of Sulphur of Irkutsk Coals During
Their Separation in Heavy Liquids.

phur in this type of coal is less thermostable. There
are 3 Figures, 5 Tables and 8 Soviet References.

ASSOCIATION: Irkutskiy gosudarstvennyy universitet (Irkutsk State
University)

Card 4/4

SAVITSKIY, Ye.M.; TYLKINA, M.A.; KHAMIDOV, O.Kh.; Prinimali uchastiye:
LOBYNTSEVA, I.M.; PRAVOVEROV, N.L.; POLYAKOVA, V.P.

Palladium-molybdenum system. Zhur. neorg. khim. 9 no.12:2738-2742
D '64. (MIRA 18:2)

I 12988-65 EWT(m)/EWP(w)/EWA(d)/EWP(t)/EWP(h) JD/JG/MLK
 ACCESSION NR: AT4047630 S/0000/64/000/000/0395/0407

AUTHOR: Savitskiy, Ye. M.; Ty*lkina, M. A.; Polyakova, V. P.;
 Tsy*ganova, I. A.; Kopetskiy, Ch. V.

TITLE: Alloys of palladium with tungsten, rhenium, osmium^M, and iridium
 27 27 27 27 27

SOURCE: Vsesoyuznoye soveshchaniye po elektricheskim kontaktam i
 kontaktny*m materialam. 3d, Moscow, 1962. Elektricheskiye kontakty* (Electric
 contacts); trudy* soveshchaniya. Moscow, Izd-vo Energiya, 1964, 395-407

TOPIC TAGS: palladium alloy, Pd-W, Pd-Re, Pd-Os, Pd-Ir

ABSTRACT: The results of an investigation of the physico-chemical interaction
 of Pa with W, Re, Os, and Ir are reported; four double constitution diagrams
 have been constructed; also, a triple diagram Pa-W-Re has been constructed;
 some characteristics of the above alloys have been investigated. With the above
 4 metals, Pd forms most simple diagrams with 2 limited solid solutions. No
 18

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L 12988-65

ACCESSION NR: AT4047630

chemical compound was detected. All these metals increase the Pd melting point; W is particularly effective in this respect: with 20% W, the alloy melting point is 2,000C and the peritectic-reaction point is 2,175C. The micro-structure, hardness, and effect of thermal treatment of the above alloys were investigated. Resistivity was measured at 25 and 100C; all additions increase the resistivity of Pd; a Pd+20% W alloy has 107-110 microhms-cm and a temperature coefficient of $(4.5-7) \times 10^{-5}$; coupled with Cu, this corrosion-resistant alloy develops 3.9 microvolt/degree; its ultimate strength, 65 kr/mm², with elongation up to 30%. Orig. art. has: 10 figures and 1 table.

ASSOCIATION: Institut metallurgii im. A. A. Baykova
(Metallurgy)

(Institute of

SUBMITTED: 13Jul64

ENCL: 00

SUE CODE: MM, EE

NO REF SOV: 000

OTHER: 000

Cord 2/2

KOSHELEV, I.I., kand.tekhn.nauk; ESKIN, N.B., inzh.; TARATUTA, V.A.,
inzh.; KAPCHITS, D.A., inzh.; ABRYUTINA, N.V., inzh.; POLYAKOVA,
V.P., inzh.; LEEDEVA, I.G., inzh.

Study of salt extraction by the flushing and separating
system of the PK-24 boiler. Elek. sta. 35 no. 4:10-15 Ap '64.
(MIRA 17:7)

ACCESSION NR: AP4041583

S/0078/64/009/007/1645/1649

AUTHOR: Savitskiy, Ye. M.; Polyakova, V. P.; Ty*lkina, M. A.;
Burkhanov, G. S.

TITLE: Palladium-tantalum system

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 7, 1964, 1645-1649

TOPIC TAGS: palladium tantalum system, palladium tantalum alloy,
palladium tantalum alloy structure, palladium tantalum alloy property

ABSTRACT: Palladium-tantalum alloys with a tantalum content varying from 0—100% were vacuum melted in a nonconsumable tungsten electrode induction furnace, in an atmosphere of purified helium, and under a pressure of 250 mm Hg, from 99.9% pure Ta and powdered 99.98% pure Pd. They were then studied by microscopic and x-ray diffraction methods, by hardness measurements, phase microhardness, and thermal emf. Alloys were studied in the as-cast condition and also after vacuum annealing at a temperature varying from 1000 to 1800C. for periods of time from 30 min to 300—500 hr; in addition, alloys containing 80% and more of Ta were annealed at 2000C for 30 min. The phase diagram

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ACCESSION NR: AP4041583

of the Pd-Ta system (see Fig. 1 of the Enclosure) plotted on the basis of the obtained data is characterized by the presence of four metallic compounds in addition to limited solid solutions. One metallic compound is of a δ -phase type with a primitive tetragonal β -U lattice with the parameters $a = 9.64$ kX, $c = 5.02$ kX; it has a microhardness of ~ 600 kg/mm² and exists between 1575—2350C. The second compound with a composition close to that of the PdTa compound has a bcc tetragonal lattice with constants $a = 3.28$ kX, $c = 6.00$ kX, and a microhardness of ~ 600 kg/mm². The alloy with 35% Ta contains a Pd₃Ta compound with a TiAl₃-type tetragonal lattice with constants $a = 3.87$ kX, $c = 7.94$ kX, and a microhardness of ~ 300 kg/mm². Annealing at 1650C of alloys containing 40—50% Ta, in which both the Pd₃Ta and PdTa compounds are present, produced a new phase which had a microhardness of ~ 400 kg/mm² and a composition close to that of the Pd₂Ta compound; its crystal lattice has not been determined. About 27 wt% of Ta is dissolved in Pd at melting temperature and about 7% at 1000C. The hardness of cast alloys increases from 54 to 640 kg/mm² when the tantalum content increases from 5 to 79.73 wt% (δ -phase), and drops sharply to ~ 170 kg/mm² in an alloy containing 85 wt% Ta (β -solid solution). Orig. art. has: 7 figures and one table.

Card 2/4

ACCESSION NR: AP4041583

ASSOCIATION: none

SUBMITTED: 14Nov63

ATD PRESS: 3064

ENCL: 01

SUB CODE: MM

NO REF SOV: 002

OTHER: 003

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ACCESSION NR: AP4041583

ENCLOSURE: 01

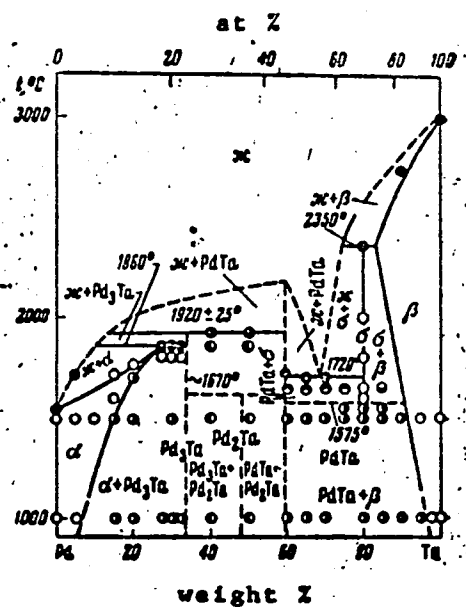


Fig. 1. Phase diagram of Pd-Ta system

Card 4/4

SAVITSKIY, Ye.M.; TYLKINA, M.A.; POLYAKOVA, V.P.

Phase diagram of the system ruthenium - rhenium - osmium.
Zhur.neorg.khim. 8 no.1:146-418 Ja '63. (MIRA 16:5)
(Ruthenium-rhenium-osmium alloys)

TYLKINA, M.A.; POLYAKOVA, V.P.; KHAMIDOV, O.Kh.

Phase diagram of the system palladium - osmium. Zhur.neorg.khim. 8 no.3:
776-770 Mr '63. (MIRA 16:4)

(Palladium-osmium alloys)

TYLKINA, M.A.; POLYAKOVA, V.P.; SAVITSKIY, Ye.M.

Phase diagram of alloys of the osmium - ruthenium system. Zhur.-
neorg.khim. 7 no.6:1467-1468 Je '62. (MIRA 15:6)
(Osmium-ruthenium alloys)

TYLKINA, M.A.; POLYAKOVA, V.P.; SAVITSKIY, Ye.M.

Phase diagram of the osmium - rhenium system. Zhur.neorg.khim.
7 no.6:1469-1470 Je '62. (MIRA 15:6)
(Osmium-rhenium alloys)

TYLKINA, M.A.; POLYAKOVA, V.P.; SAVITSKIY, Ye.M.

System palladium - tungsten - rhenium. Zhur. neorg. khim.
9 no.3:671-673 Mr '64. (MIRA 17:3)

SAVITSKIY, Ye.M.; TYLKINA, M.A.; POLYAKOVA, V.P.

Phase diagram of alloys of the ruthenium - rhenium system. Zhur.
neorg.khim. 7 no.2:439-441 F '62. (MIRA 15:3)
(Ruthenium-rhenium alloys) (Phase rule and equilibrium)

S/078/62/007/006/020/024
B110/B144

17 12 20
AUTHORS: Tylkina, M. A., Polyakova, V. P., Savitskiy, Ye. M.
TITLE: Phase diagram of osmium - ruthenium alloys
PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 6, 1962,
1467 - 1468

TEXT: An Os - Ru phase diagram was established for the first time, by determining melting point and hardness and by microstructural and x-ray structural phase analyses. As Os and Ru have hexagonal crystal structures, and their atomic radii differ by no more than 1.51%, of solid solutions were assumed to form in an unbroken series. Os and Ru powders of 99.8% purity were pressed into tablets, sintered at 1200°C in vacuo, then melted in an evacuated electric arc furnace under a helium pressure of 200 - 250 mm Hg. Cast samples annealed at 2000°C for 1 hr and at 1000°C for 500 hrs were used for the phase analyses. Ground sections etched in 15% HNO₃ using alternating current were used for the microstructural analysis. Lattice constants and hardness were determined under Cu-K_α radiation and under 5-kg load (in the Vickers test),
Card 1/2

S/078/62/007/006/022/024
B110/B144

AUTHORS: Tylkina, M. A., Polyakova, V. P., Savitskiy, Ye. M.

TITLE: Palladium-iridium phase diagram

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 6, 1962, 1471-1473

TEXT: The Pd-Ir phase diagram was established by measuring the melting point, the microhardness of the phases and the Brinell hardness, and by microstructural and x-ray phase analyses. Pd and Ir have face-centered cubic crystal structures and similar electronegativity (Ir: 2.10; Pd: 2.08); their atomic radii differ by not more than 1.5 %. Metal powders of 99.8 % purity were pressed, sintered in vacuo, and melted in an induction furnace - or, when containing 40-80 % by weight of Ir, in an electric arc furnace - under a helium atmosphere at 200-250 mm Hg. Heat treatment of the samples for the phase analysis: (1) All alloys were quenched from temperatures near their melting points. (2) Alloys containing 40-100 % Ir were quenched from 1600°C in vacuo. (3) All alloys were quenched from 1500°C in vacuo, from 1300°C, 1100°C, 900°C, and 700°C. (4) Annealing followed for 300 hrs at 1000°C, then cooling to 400°C at a

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S/078/62/007/006/022/024
B110/B144

Palladium-iridium phase diagram

rate of 100°C/24 hrs, and further cooling in the furnace. Cu-K_α radiation was used for the x-ray structural analyses. Sections of alloys rich in Pd, etched with an ethanol solution of Br, and sections of alloys rich in Ir, etched in 10 % HCl with alternating current, were used for the microstructural analysis. The hardness and microhardness were determined under a 250-kg load in the Brinell press, and under 50-g and 20-g loads in the MTM-3 (PTM-3) device, respectively. Results: (1) A peritectic diagram ((liq + β ⇌ α) 1760 ± 25°C) with two bounded solid solutions was found. (2) The region of the solid α-solution of Ir in Pd decreases from 38 % by weight of Ir at ~1700°C to 5 % by weight at <700°C. (3) Alloys containing ≤ 30 % by weight Ir, quenched from 1500°C, have a single-phase polyhedral structure. (4) The melting point of the solid α-solution increases from that of Pd (1552°C) to 1620°C (30 % by weight of Ir). (5) The microhardness increases from 40 kg/mm² (pure Pd) to 200 kg/mm² (30 % by weight of Ir). The hardness of alloys with solid α-solution, quenched from 1500°C increases continuously from 35 kg/mm² (pure Pd) to 120 kg/mm² (30 % by weight of Ir). (6) The region of the solid β-solution decreases from 17 % by weight of Pd at ~1700°C to 9 % by weight of Pd at 1100°C. On quenching from <1600°C, a second phase is separated, and the

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Palladium-iridium phase diagram

S/078/62/007/006/022/024
B110/B144

hardness of an alloy containing 10 % by weight of Pd increases. (7) Two face-centered cubic solid solutions occur in alloys containing 60 and 70 % by weight of Ir when quenched from temperatures near the melting point. There are 2 figures.

SUBMITTED: January 11, 1962

Card 3/3

TYLKINA, M.A.; POLYAKOVA, V.P.; SHEKHTMAN, V.Sh.

System iridium - tungsten. Zhur. neorg. khim. 8 no.11:2549-
2555 N '63. (MIRA 17:1)

S/078/62/007/006/021/024
B110/B144

17 1280
AUTHORS: Tytkina, M. A., Polyakova, V. P., Savitskiy, Ye. M.

TITLE: Phase diagram of osmium-rhenium alloys

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 6, 1962, 1469-1470

TEXT: An Os-Re phase diagram was established for the first time, by measuring melting point and hardness and by microstructural and x-ray structural phase analyses. It was assumed that an unbroken series of solid solutions is formed by substitution as these metals belong among transition metals having incomplete d-shells, they adjoin one another in the periodic system, they have isomorphous crystal structures, and their atomic radii differ but little. Metals of 99.8 % purity were pressed, sintered, and melted in an electric arc furnace under a helium atmosphere at 200-250 mm Hg. Cast samples annealed at 2000°C for 1 hr and at 1000°C for 500 hrs were used for the analyses and measurements. Microsections etched in 15 % HNO₃ using alternating current were used for the microstructural analysis. Lattice constants and hardness were determined respectively under Cu-K_α radiation and under 5-kg load (in the Vickers test).

Card 1/2

S/078/62/007/002/017/019

B127/B110

AUTHORS: Savitskiy, Ye. M., Tytkina, M. A., Polyakova, V. P.

TITLE: Phase diagram of the ruthenium - rhenium melt

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 2, 1962, 439 - 441

TEXT: The existence of a continuous series of solid solutions in all concentrations is assumed on the basis of the vicinity of Ru and Re in the periodic system, the similarity of their radii, and isomorphy of the crystal structure. This assumption was confirmed by experiments. Various specimens, cast and thermally treated, were used for the phase analysis. V. S. Shekhtman used cuts for an X-ray diffraction analysis in a θ/θ (RKU) chamber by Cu-K α radiation. This analysis showed the solid solutions to be of hexagonal structure. There are 2 figures, 1 table, and 1 Soviet reference. ✓

SUBMITTED: June 23, 1961

Fig. 1. (a) Phase diagram Ru - Re; (b) dependence of the lattice constant
Card 1/1/

RODIONOV, V.M., USPENSKAYA, V.D., ZAMYATKINA, O.G., GRUNT, T.A., POLYAKOVA, V.B

Effect of total-body x-irradiation on the restoration of serum
proteins following blood loss in dogs [with summary in English].
Vop.med.khim. 4 no.5:327-338 S-O '58. (MIRA 11:11)

1. Institut biologicheskoy i meditsinskoy khimii AMN SSSR,
Moskva.

(BLOOD PROTEINS,

restoration after exper. hemorrh., eff. of total
body x-irradiation (Rus))

(ROENTGEN RAYS, effects,

total body, on blood protein restoration after
exper. hemorrh. (Rus))

(HEMORRHAGE, exper.

eff. of total body x-irradiation on restoration
of blood proteins (Rus))

S/078/62/007/001/003/005
B119/B110

AUTHORS: Rudnitskiy, A. A. (Deceased), Polyakova, V. P.
TITLE: Phase diagram and properties of palladium - iridium - silver alloys
PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 1, 1962, 151-156
TEXT: This paper deals with the production of alloys with properties similar to those of Pt alloys so far used in technology, or of pure Pt. The examined alloys were fused from 99.99% Pd, pure Ir, (< 0.01% impurities), and doubly refined Ag in corundum crucibles under a borax layer in a high-frequency furnace. The regulus obtained was forged into bars at 1000-1200°C to measure hardness, thermoelectromotive force (t.e.m.f.), and microstructure. The forged pieces were cold rolled and drawn into wires 1 mm in diameter to measure the electrical resistance by the compensation method with a ППТН-1 (PPTN-1) potentiometer, and tensile strength with a test device of the "Vibrator" Plant. Wires 0.5-0.3 mm thick and 0.5-1 m long were used to measure t.e.m.f. versus Pt. Alloys with less than 5% Ag and more than 15% Ir could not be forged, rolled, stretched.

Card 1/3

Phase diagram and properties ...

S/078/62/007/001/003/005
B119/B110

The bars and wires obtained were thermally treated in different ways (tempered and hardened). Alcoholic bromine solution and HNO_3 were used as caustics. Results: The phase diagram of the system Pd - Ir - Ag was constructed. With alloys containing 90% by weight of Pd, hardness, tensile strength, electrical resistance, and absolute t.e.m.f. decrease considerably as the Ir content decreases to 5%; below that, they increase again. Relative stretching and temperature coefficient have a maximum at 5% Ir. The behavior of alloys with 80% Pd is similar. Addition of Ir to Pd - Ag alloys causes high increase of strength and hardness whereas electrical properties and temperature coefficient remain constant. Alloys containing 2% Ir have a hardness of 87.8 kg/mm² with 80% Pd, and 99.1 kg/mm² with 70% Pd; maximum tensile strength was 49 kg/mm² with 80% Pd - 18% Ag - 2% Ir alloys. Mechanical workability is largely reduced by adding 1% Ag to Pd - Ir alloys. The alloy consisting of 80% Pd, 19% Ir, and 1% Ag cannot be stretched or forged at 1400°C. Among others, papers by Ye. Ya. Rode (Ref. 3: Izv. Sektora platiny, 13, 167 (1925)), V. A. Nemilov, A. A. Rudnitskiy, T. A. Vidusova (Ref. 4: Izv. Sektora platiny, 20, (1946)), A. A. Rudnitskiy (Ref. 8: Termoelektricheskiye svoystva blagorodnykh metallov. Akademizdat, (1956)), V. A. Nemilov, T. A. Vidusova (Ref. 10: Izv. Sektora platiny, 25, 20 (1950)) are mentioned. There are 5 figures, Card 2/3

5(2)

SOV/78-4-10-20/40

AUTHORS: Radnitskiy, A. A., Polyakova, V. P.

TITLE: Investigation of Iridium - Gold Alloys

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 10,
pp 2304 - 2307 (USSR)

ABSTRACT: Alloys were melted from iridium and gold powder and draw out to bars and wires suitable for the investigation after mechanical and thermal treatment. Micro-structure, micro-hardness, electric resistance and its temperature coefficient, thermoelectric current and - in alloys rich in gold - the melting temperature were investigated. The results are given in tables 1 and 2. All alloys rich in gold with more than 0.1% Ir separate metallic iridium in the form of a white phase (Fig 1), whereas the gold separation from alloys rich in iridium sets in at a 2% gold content. Consequently the two metals are soluble in each other to a very limited extent only. The microhardness of the alloys rich in gold shows a maximum at 0.1% Ir, that of the alloys rich in Ir at 2% Au. The electric resistance was measured at 25 and 100° with the PPTN type potentiometer (Fig 3).
Card 1/2 The maximum was found in the alloy with 0.1 % Ir, whereas

Investigation of Iridium - Gold Alloys

SOV/78-4-10-20/40

the temperature coefficient of the electric resistance shows a minimum in this point. The thermoelectric current (Fig 3) is not affected by the addition of iridium at 6000, above 700° a small decrease occurs in the alloy with 0.1% Ir. The thermal analysis of the alloys up to a content of 15% Ir carried out by means of the Kurnakov-pyrometer revealed that the melting point of these alloys deviates from that of gold to practically no extent. There are 4 figures, 2 tables and 3 references.

SUBMITTED: June 28, 1958

Card 2/2

L 23883-65 EWT(m)/EPF(n)-2/EPR/EWP(t)/EWP(k)/EWP(b) PS-4/Pu-4
IJP(c) JD/JG/MLK

ACCESSION NR: AT5002771

S/0000/64/000/000/0161/0167

AUTHOR: Tylkina, M.A. (Candidate of technical sciences); Tsyganova, I.A.;
Polyakova, V.P.

TITLE: Physicochemical interaction of rhenum with elements of the platinum group,
and the properties of certain alloys (a review) 27

SOURCE: Vsesoyuznoye soveshchaniye po probleme reniya. 2d, Moscow, 1962. Reniy
(Rhenium); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 161-167

TOPIC TAGS: rhenium, rhenium alloy, platinum group element, rhenium solid
solution, peritectic point, rhenium alloy mechanical property, rhenium alloy conductivity

ABSTRACT: The authors first review the physicochemical interaction of rhenium with
the platinum-group metals (ruthenium, osmium, tungsten, palladium, rhodium, iridium,
platinum). The solubility of rhenium in these metals and vice versa is illustrated with
graphs. Rhenium forms a continuous series of solid solutions with ruthenium and osmium;
with rhodium, palladium, iridium and platinum, rhenium forms systems represented by
peritectic-type phase diagrams with two limited solid solutions. No chemical compounds
are formed in these systems. The relation between the difference in the melting points

Card 1/2

L 23883-65

ACCESSION NR: AT5002771

2
of the metals and the peritectic point is discussed. The authors then discuss the mechanical properties of alloys formed by rhenium with platinum-group metals (hardness of alloys of the system rhenium - ruthenium - osmium, effect of rhenium on the hardness and strength of palladium, effect of annealing temperature on the strength and plasticity of palladium-rhenium alloys). The article concludes with a description of the electrical properties of such alloys (resistance, thermoelectromotive force). Orig. art. has: 10 figures. 16

ASSOCIATION: none

SUBMITTED: 05Aug64

ENCL: 00

SUB CODE: MM

NO REF SOV: 009

OTHER: 002

2/2

Cord

TYLKINA, M.A.; POLYAKOVA, V.P.; SAVITSKIY, Ye.M.

Phase diagram of the system palladium - tungsten. Zhur.neorg.khim.
6 no.6:1471-1474 Je '61. (MIRA 14:11)
(Palladium-tungsten alloys)

18 9200

AUTHORS: Tykhina, M. A., Iskhakova, V. I., Iskhakova, V. I.

TITLE: Phase diagram of the palladium - tungsten system

PERIODICAL: Zhurnal teoreticheskoy fiziki, 1977, vol. 61, no. 1, 147-1474

TEXT: Publications only contain data on the formation of solid solutions of 22.6% by weight of tungsten in palladium and the absence of chemical compositions of both elements. The phase diagram (Fig. 1) of the palladium - tungsten system was drawn by determination of the fusing temperature, microscopical and X-ray phase analyses, measurements of hardness and microhardness of the plates as well as of the absolute thermo-emf. The initial substances of the Pd powder and W d. powder were mixed, briquetted and sintered at 1500°C and 10^{-5} mm Hg and then melted in the arc furnace in purified argon atmosphere. The fusing temperature was determined according to Yu. M. Shteynlyub 1962 (Zh. fiz. khimii, 36, 11, 1962) by the determination of calcium and with an optical pyrometer. For the phase analyses the alloys were annealed at 10^{-5} mm Hg for 6 hr at 1500°C and for 10 hr at 1400°C , and then cooled.

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Phase diagram of the palladium - tungsten system

by air. The X-ray investigation was made with Cu K α emission in the chamber of the type DMR-100. For the microscopic analysis, alloys with high Pd content were etched with 10% HCl and 2% H $_2$ O $_2$ in H $_2$ O, alloys with high W content with a mixture of 1 part of 5% H $_2$ O $_2$ and 1 part of 10% KOH. The hardness was investigated in the Vickers apparatus with 5 kg, the microhardness of the phases in the DMR-100 apparatus with 50 g and 20 g load. The specific thermal effect was determined according to A. A. Kuznetsov (Ref. 4). Termoelektricheskiye svoystva blagorodnykh metallov i ikh sployny (Ref. 5). AN SSSR Moskva 1965. Fig. 1a shows the phase diagram Pd-W, 1% C. The diagram composition properties. The diagram of the system Pd-W is presented in Fig. 1a with two limited zones of solid solution. The structure and X-ray analysis produced monophase structure of the solid solution with face-centered cubes with lattice parameters (mm) of all alloys of 33% by weight W. The alloy with 25% by weight W is a monophase solid solution at 2150°C; a second phase precipitates at lower temperatures. The fusing temperature of solid solutions rises from the palladium fusing point of 1553°C up to 2100°C for an alloy with 25% by weight W. The

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23004

Phase diagram of the palladium - tungsten ... S/078/61/006/006/010/013
B110/B206

absolute thermo-emf of the solid α -solution changes sinusoidally. On the basis of tungsten, the zone of the monophase solid β -solution is much narrower. It amounts to 2% by weight Pd in the fusing point vicinity and drops to 1.6% by weight at 1500°C. In the cast state, the alloy with 98% by weight W shows a monophase solid solution. After quenching from 1500 and 1000°C, a second phase appears, which increases with decreasing temperature. Cubic W structure was determined for this phase by X-ray analysis. The $\alpha + \beta$ -diphase zone lying between the α - and β -zone clearly showed primary gray dendrite crystals of the solid β -solution, which were surrounded by the lighter α -solution. The β -portion rises with an increase of tungsten and the α -crystals only remain as narrow veins at the grain boundaries of the β -crystals. The microstrength of the α -solution amounted to about 220 kg/mm², that of the β -solution to about 440 kg/mm². The curve of the absolute thermo-emf, almost horizontal in the diphase region, dropped considerably at the transition to the region of the β -solution. The alloys in the region of the solid tungsten- and palladium solutions can be well shaped by cold processing, so that they may be used as potentiometric and corrosion-resistant materials. The authors thank Ye. N. Kunenkova for her collaboration. There are 2 figures, 1 table,

Card 3/6

23084

Phase diagram of the palladium - tungsten ... S/078/61/006/006/010/013
B110/3206

and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc.

SUBMITTED: December 23, 1960

Fig. 1: Diagram (a - d) of the
phase and property of the
palladium - tungsten system.

Legend: 1) microhardness in
kg/mm²; 2) tempered at 1000°C;
3) cast; 4) W content in % by
weight

(For Fig. 1 see Card 6/6

Card 4/6

USPENSKAYA, V.D., GORYACHENKOVA, Ye.V., MOGILEVSKAYA, Z.G., POLYAKOVA, V.P.

Electrophoretic purification of diamine oxidase [with summary in English]. Biokhimiia 23 no.2:211-219 Mr-Apr '58 (MIRA 11:6)

1. Institut biologicheskoy i meditsinskoy khimii AN SSSR, Moskva.
(HISTAMINASE,
purification by electrophoresis, technic (Rus))

POLYAKOVA, V. P.

POLYAKOVA, V. P. and UKHIN, B. N. Standardizing Selection and Portioning of Coal
Samples at Electric Power Plants (O Standartizatsii Skhemy Otбора
i Razdelki Prob Uglya na Elektrostantsiyakh), pp. 13-15

A description of a standard sampling installation for selection of coal portions at
a large unnamed electric power plant is given. (Drawings and table).

SO: ELECTRICHESKIYE STANTSII, No. 12, Dec. 1952, Moscow (1614306)

1. POLYAKOVA, V. P.: UKHIN, B. N.
2. USSR (600)
4. Electric Power Plants
7. Standardizing coal sampling schemes at electric power plants. Elek.sta., 23, no. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

5(2)

AUTHORS:

Rudnitskiy, A.A., Polyakova, V.P.

05867

SOV/78-4-11-20/50

TITLE:

Investigation of Silver-Iridium Alloys

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 11,
pp 2515-2517 (USSR)

ABSTRACT:

So far, silver-iridium alloys have not yet been investigated systematically. H. Rössler (Ref 1) has, however, shown that iridium is insoluble in liquid silver. The authors made an attempt to produce alloys with an iridium content of 0.5, 1, 5 and 10% by weight in silver and a silver content of 5 and 10% by weight in iridium. The authors measured the microstructure (Fig 1) and microhardness (by means of a PMT-3 hardness tester) of the alloys, the specific electric resistance (PPTN potentiometer), its temperature coefficient, the thermoelectric force and the melting temperature (by means of N.S. Kurnakov's pyrometer). The experimental results contained in table 1 and figure 1 indicate that the two components in liquid phase are mutually soluble only to a certain extent. The solubility of Ir in Ag is below 0.5% as results from the increase in microhardness and thermoelectric force of alloys with 0 - 0.5% of Ir. The

Card 1/2

SAVITSKIY, Ye.M.; POLYAKOVA, V.P.; TYLKINA, M.A.; BURKHANOV, G.S.

System palladium - tantalum. Zhur. neorg. khim. 9 no.7:
1645-1649 J1 '64. (MIRA 17:9)

VARNAVSKIY, I.N.; POLYAKOVA, V.S.; ARONE, R.G.; SOKOLOVSKIY, P.I.

15XSND thermally processed steel. Prom. stroi. 42 no.1;
36-37 '65. (MIRA 18:3)

PA-24T83

May/June 1947

POLYAKOVA, V. V.

USSR/Metals
Bronze
Tin

"Spectral Analysis of Bronze and Tin, and the Grading of Ferrous and Nonferrous Alloys," L. M. Brintake, L. M. Ivantsov, V. V. Polyakova, 6 pp

"Iz Ak Nauk SSSR, Ser Fiz" Vol XI, No 3

Discusses rapid determination of tin, zinc and lead in stannic bronzes, the quantitative spectral analysis of tin on copper or iron, a method for distinguishing between ferrous and nonferrous alloys with the aid of a styloscope, which is equipped with a photometric eyepiece, and the analysis of nonferrous and ferrous alloys. Sketches of the equipment. One of the comments appended to this work urges that the new eyepiece suggested by the author be turned out in quantity to supply all the requirements of the industry.

PA-24T83

FOLYAKOVA, V. V.

Jan 50

USSR/Metals - Nickel Spectrum Analysis

"Determination of Admixtures in Metallic Nickel by the Method of Spectrum Analysis,"
L. N. Varshavskaya, L. M. Ivantsov, V. V. Polyakova, State Sci Res Inst of Nonferrous
Metals, 4 pp

"Zavod Lab" Vol XVI, No 1

Develops procedure for determination of iron, silicon, cobalt and copper in commercial
grades of nickel over following ranges: Fe 0.05-0.3%, Si 0.15-0.25%, Co 0.30-0.75%,
and Cu 0.03-0.30%. Method provides for using ISF-22 spectrograph, microphotometer,
and condensed spark generator. Accuracy of determination (3.7% for Fe, 4.6% for Si,
3.7% for Co, and 3.5% for Cu) thus obtained satisfies requirements of production
control.

PA 159T60

POLYAKOVA, V. V.

USSR/Metals - Analysis
Steeloscope

Apr 50

"Application of the Steeloscope With an Improved Photometric Eyepiece for Rapid Analysis of Metals and Alloys," L. M. Ivantsov, V. I. Malinina, V. V. Polyakova, State Sci Res Inst of Nonferrous Metals, 4 pp

"Zavod lab" Vol XVI, No 4

Describes improved model of photometer and method for rapid analysis of alloys with aid of steeloscope with photometric eyepiece. Determination accuracy is close to that of analyses conducted with steelometer. Eyepiece may be used with steeloscope of any type.

PA 160768

POLYAKOVA, V.V.

USSR/Chemistry - Spectral analysis

Card 1/1 Pub. 43 - 66/97

Authors : Britske, M. E.; Gerken, E. B.; Zdanovich, I. D.; Ivantsov, L. M.;
Kafanova, T. A.; Malinina, V. I.; Mironova, E. A.; and Polyakova, V. V.

Title : Spectrographic determination of admixtures in Pb, crude lead, water
jacket slag and certain powders

Periodical : Izv. AN SSSR. Ser. fiz. 18/2, 283-284, Mar-Apr 1954

Abstract : Report is presented on a complex of methodical works conducted by the
State Scientific Research Institute of Non-Ferrous Metals on the
determination of admixtures in lead, crude lead, waterjacket slag and
certain powders by means of spectrographic methods. The results
obtained in these experiments are tabulated. Tables.

Institution : State Scientific Research Institute of Non-Ferrous Metals

Submitted :

POLYAKOVA, V.V.

Investigation of the spectral characteristics of analysis
standards made of pressed powdered metals. Izv.AN SSSR.
Ser.fiz.19 no.2:165-166 Mr-Ap '55. (MLRA 9:1)
(Tartu--Spectrum analysis--Congresses)

POLYAKOVA, V. V.

POLYAKOVA, V. V. "Investigation of the Features and Practical Application of
Briquetted Standards and Samples for Purposes of Spectral Analysis
of Nonferrous Metals." Min Nonferrous Metallurgy USSR. State
Sci Res Inst of Nonferrous Metals "Gintsvetmet." Moscow, 1956.
(Dissertation for the Degree of Candidate in Technical Science)

So: Knizhnaya Letopis', No. 19, 1956.

TROITSKAYA, M.I.; POLYAKOVA, V.V.; SOLNTSEV, N.I.; FILIPPOVA, N.A.

Organization of analytical work at the State Scientific Research
Institute of Nonferrous Metals; summary of work accomplished in
the last five years. Sbor.nauch.trud.GINTSVETMET no.12:5-13 '56.
(Metallurgical research) (MLRA 10:2)
(Nonferrous metals--Metallurgy)

MOSHKOVSKIY, Yu.Sh.; POLYAKOVA, V.V.; Prinimala uchastiye: ZHDANOVA, V.,
praktikantka

Hypochromia of cyanin dye in nucleic acid solution. Biofizika
9 no.4:526-527 '64. (MIRA 18:3)

1. Institut khimicheskoy fiziki AN SSSR, Moskva (for Moshkovskiy,
Polyakova). 2. Kafedra vysokomolekulyarnykh soyedineniy
khimicheskogo fakul'teta Moskovskogo gosudarstvennogo universiteta
(for Zhdanova).

5 (2)

AUTHORS:

Filimonov, L. N., Polyakova, V. V.

SOV/32-25-8-27/44

TITLE:

On Standard Samples for Spectrum Analysis

PERIODICAL:

Zavodskaya laboratoriya, 1959, Vol 25, Nr 8, pp 972-980 (USSR)

ABSTRACT:

The All-Union standard samples (SS) for spectrum analysis of steels, cast iron and iron alloys as well as those (SS) for the chemical analysis are now being delivered. There is a list of the (SS) of metals, alloys, ores and the processing products (including the type designations) (Tables 1-8). The (SS) prepared by the Laboratoriya standartnykh obraztsov Ural'skogo instituta chernykh metallov (LSO) (Laboratory of the Standard Samples of the Ural Iron-metal Institute (LSO)) are not listed, as they have been listed before (Ref 1). The article contains some data on the planned preparation of new (SS) (Tables 1, 3, 4, 8). The above-mentioned tables give the installations in which the (SS) are being prepared, and the following are especially mentioned:
Gintsvetmet - Gosudarstvennyy institut tsvetnykh metallov (Moskva)
(Gintsvetmet - State Institute of Non-ferrous Metals (Moscow)),
Vniitsvetmet - Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnykh metallov (g. Ust'-Kamenogorsk) (Vniitsvetmet - All-Union Scientific Research Institute of Non-ferrous Metals (City:

Card 1/2

On Standard Samples for Spectrum Analysis

SOV/32-25-8-27/44

Ust'-Kamenogorsk)), IONKh AN USSR - Institut obshchey neorganicheskoy khimii AN USSR (Laboratorii v Odesse) (IONKh AS UkrSSR - Institute of General Inorganic Chemistry of the AS UkrSSR (Laboratories in Odesa)), Tsniolovo, Gipronikel', Giprotsvetmetobrabotka, VAMI - Vsesoyuznyy alyuminiyevo-magniyevyy institut (VAMI - All-Union Aluminum-magnesium Institute), Komissiya po spektroskopii pri IFM - Komissiya po spektroskopii pri Institute fiziki metallov, g. Sverdlovsk (Commission for Spectroscopy at the IFM - Commission for Spectroscopy at the Institute of Metalphysics, City: Sverdlovsk), VIAM, Irkutskiy gosudarstvennyy institut redkikh i malykh metallov (Irkutsk State Institute of Rare and Minor Metals). The article contains a list of the (SS) for rare metals and its ores, given in 7 groups, to be prepared by the IONKh of the AS UkrSSR, and there also is an explanation of the preparation method and the testing of the (SS). There follows a description of the preparation of the material for producing the (SS) and some examples. A separate paragraph treats the determination of the components of the (SS). There are 8 tables and 30 references, 29 of which are Soviet.

Card 2/2

POLYAKOVA, V.V. (Moscow)

Lesson on "The synthesis of ammonia" with the use of production
models. Khim. v shkole 9 no.4:24-28 Jl-Ag '54. (MLRA 7:8)
(Ammonia)

ANDRIADI, Ye.L.; POLYAKOVA, V.V.

Spectrum analysis of silver nitrate and metallic (refined) silver.
Sbor. nauch. trud. Gintsvetmeta no.18:100-103 '61. (MIRA 16:7)

(Silver nitrate--Spectra)
(Silver--Spectra)

POLYAKOVA, V.V., ved. red.; BASHMAKOV, G.M., tekhn. red.

[Instructions on safety engineering in underground repairing
of wells]Instruktsiia po tekhnike bezopasnosti pri podzemnom
remonte skvazhin. Moskva, Gostoptekhnizdat, 1962. 29 p.
(MIRA 15:9)

(Oil wells--Safety regulations)

POLYAKOVA, V.V.; BYKHOVSKIY Yu.A.

New methods of control of copper matte converting processes.
Sbor. nauch. trud. GINTSVETMET no.15:420-428 '59. (MIRA 14:4)
(Copper--Metallurgy)
(Converters)

SOV/137-57-1-1619

Translation from: Referativnyy zhurnal. Metallurgiya, 1957, Nr 1, p 215 (USSR,

AUTHORS: Troitskaya, M. I., Polyakova, V. V., Solntsev, N. I., Filippova, N. A

TITLE: Organization of Analytical Work at the Gintsvetmet [State Institute for Nonferrous Metals]. Results of Work During the Last Five Years (Organizatsiya analiticheskoy raboty v Gintsvetmete. Itogi raboty za posledneye pyatiletiye)

PERIODICAL: Sb. nauch. tr. Gos.n-i. in-t tsvet. met., 1956, Nr 12, pp 5-13

ABSTRACT: The Gintsvetmet [State Institute for Nonferrous Metals] has three laboratories: One for chemical analysis, one for physical methods of investigation, and one for the study of the material composition. An account is made of the nature of the work of these laboratories in the analysis of raw ores, the middlings, and pure metals.

N. G.

Card 1/1

5(4)

SOV/32-25-4-1/71

AUTHORS:

Koritskiy, V. G., Polyakova, V. V., Filimonov, L. N.

TITLE:

Standards for the Spectrum Analysis (Ob etalonakh dlya spektral'nogo analiza)

PERIODICAL:

Zavodskaya Laboratoriya, 1959, Vol 25, Nr 4, pp 387-390 (USSR)

ABSTRACT:

The problem of a unification in the manufacture of standard samples (SS) for the spectrum analysis arises in the USSR. In the present paper it is pointed out that at present the only institution especially charged with this problem is the Laboratoriya standartnykh obraztsov Ural'skogo instituta chernykh metallov (LSO) (Laboratory for Standard Samples of the Ural Institute of Iron Metals), and that there only SS for the analyses of iron metals are being made. For the manufacture of SS for the analyses of other metals there are at present about 15 different organizations where this work is done, for the major part in an unorganized way. In particular, it is suggested to reorganize the LSO to the Institut spektral'nykh etalonov i khimicheskikh normal'ey (Institute for Spectral Standards and Chemical Standards). For the more special analyses of pure metals, for instance, the institutes of the proper branches of in-

Card 1/2

Standards for the Spectrum Analysis

SOV/32-25-4-1/71

dustry, such as Gipronikel', Giprotsmo, Gintsvetmet, VNIITsvetmet, VAMI, TsNIIolovo etc should be appertaining. An example for passing from the usual small-scale manufacture of SS for the "proper use" to a common manufacture of SS was already given by a firm which prepared a series of 50 high-quality SS of the bronze Br. AZh 9-4. A suggestion for an extended centralization of the manufacture of SS was also made by the Kamensk-Ural'skiy zavod obrabotki tsvetnykh metallov (Kamensk-Ural Works for the Processing of Nonferrous Metals). Good SS for copper alloys MTs 2 are issued by the Kaluzhskiy turbinniy zavod (Kaluga Turbine Works). Some shortcomings of the present manufacture of SS are pointed out, and it is stated that in the planning and execution of a controlled manufacture of SS an important part is played by the works laboratories, the technical departments of the firms, the administration of the Councils of Economy, and particularly the Komitet standartov (Committee of Standards).

Card 2/2

BAGDASAROV, V.A.; KAZAKOV, A.S.; SARKISYAN, A.M.; BYKHOVSKIY, Yu.A.;
POLYAKOVA, V.V.

Automatizing converters, using converter gases, and the spectral
method of controlling converting processes. TSvet. met. 31 no.5:
28-34 My '58. (MIRA 11:6)

1. Alavardskiy medno-khimicheskiy kombinat (for Bagdasarov, Kazakov,
Sarkisyan). 2. Gosudarstvennyy institut po tsvetnym metallam (for
Bykhovskiy, Polyakova).
(Converters) (Nonferrous metals--Metallurgy) (Automatic control)

AUTHORS: Bykhovskiy, Yu.A. and Polyakova, V.V. SOV/136-58-5 5/22
Kazakov, A.S. and Sarkisyan, A.M. Bagdasarov, V.A.

TITLE: Converter Automation, Utilisation of Converter Gases
and Application of a Spectroscope Method for Controlling
the Bessemerisation Process (Avtomatizatsiya konverterov
ispol'zovaniye konverternykh gazov i primeneniye spek-
tral'nogo metoda kontrolya protsessa Bessemerovaniya)

PERIODICAL: Tsvetnyye Metally, 1958³/Nr 5, pp 28 - 34 (USSR)

ABSTRACT: At the Alaverdi Copper-chemical Combine, the produc-
tivity of converter operation and of the sulphuric-acid
plant and converter campaign life were increased in 1957
by introducing automatic control and rapid analytical
methods. The authors hope their description of the
methods and their development will be useful to other
combines. In addition to the authors, the following
participated in the work: from the Alaverdi Combine -
Sakhanskiy, Zarapov, Bezhanov, Arutyunyan, Davtyan, Kor-
tava, Tefanov, Tumanyan and other; from Gintsvetmet -
Rodionova, Kuznetsov and Olevanov; from the TsPKE of
the Proyektmontazhautomatika (now Giprotsvetmet) -
Rozendor, Averbukh and Finger; from Kavteplokontrol'-
Dzodtsoyev, Kapysitskiy and Vishnevskiy. The authors

Card1/3

Converter Automation, Utilisation of Converter Gases and Application
of a Spectroscope Method for Controlling the Bessemerisation Process

SOV/136-58-5-5/22

describe first the automation of converters with details of the instruments and a circuit diagram (Figure 1). The component parts of the system are units for automatic regulation of gas pressure in the dust-catcher, for automatic control of blast flow rate and pressure, for protecting tuyeres from filling with liquid metal in the event of blast pressure falling below the safe value, for continuous temperature measurement in the converter (Figure 2) and a series of alarm signals. The spectroscopic analytical method adopted was developed after a special investigation in which the continuous flame spectrum was photographed and also studied visually. For determining the readiness of white matte, a pocket spectroscope is now used, the method being based on the appearance of two narrow lines (in the region 5400 and 5700 Å). For controlling the end of the bessemerisation process, the relation between the SO₂ content of the exit gases and the state of the process is used. observations being made with a steeloscope. The results

Card2/3

SOV/136-58-5-5/22
Converter Automation, Utilisation of Converter Gases and Application
of a Spectroscope Method for Controlling the Bessemerisation Process

in 1957 of the adoption of automation of the combine were a
5-6% increase in converter heat weight, 7-8% decrease in
duration, a converter campaign life increase up to 5 1/2 from
3 months, increase in sulphur-dioxide concentration to
6-8% and savings of materials and power; production of
elementary sulphur also increased and the overall productivity
of the converter shop rose by 15%.
There are 4 figures and 2 Soviet references.

ASSOCIATIONS: Gintsvetmet and Alaverdi medno-khimicheskiy
kombinat (Alaverdskiy Copper-chemical Combine)

Card 3/3

1. Furnaces--Control systems
2. Waste gases--Applications
3. Sulfuric acid--Production
4. Steel--Production
5. Spectrophotometers--Applications

AUTHOR:

Polyakova, V.A., Candidate of Technical Sciences
Laboratory Research

6-10-5/12

TITLE:

Carried out by Means of the Stereographic Apparatus Developed by Professor F.V.Drobyshev (Laboratory research on the stereographic apparatus developed by Professor F.V.Drobyshev)
Geodeziya i Kartografiya, 1957, Nr 10, pp 33-36 (USSR)

PERIODICAL:

ABSTRACT:

The stereographic apparatus developed by Drobyshev is distinguished from other devices of similar type by its small size and some peculiarities in operation. On the strength of the examination of the device dealt with here the following may be said:
1.) The space coordinates of the points are determined in the stereographic apparatus with great accuracy irrespective of the super-elevation amount, i.e. the device may be recommended for the stereophotogrammetrical taking of views of mountainous and undulated territories. 2.) The stability of the accuracy of the device as a whole depends upon the quality of production and mounting. The faults found in the course of investigations can easily be remedied in series production. There are 2 tables.

AVAILABLE:

Library of Congress

Card 1/1

POLYAKOVA, V.V.
BRITSKY, M.B., red.; BRONSHTEYN, A.N., red.; MATVEYEV, N.I., red.; POLYAKOVA,
V.V., red.p FILIMONOV, L.N., red.; TRUSOV, N.S., tekhn.red.

[Papers read at the Second All-Union Conference of Spectroscopic
Assayers of Nonferrous Metals] Materialy 2-go Vsesoiuznogo sove-
shchaniia spektroskopistov-analitikov tsvetnoi metallurgii. Red.
kollegiia M.B.Britske, i dr. Moskva, Nauchno-tekhn.ob-vo tsvetnoi
metallurgii, 1957. 128 p.
(MIRA 11:3)

1. Vsesoyuznoye soveshchaniye spektroskopistov-analitikov tsvetnoy
metallurgii, 2d, Moscow, 1955.
(Nonferrous metals) (Assaying)

POLYAKOVA, V. V.

27 18
 Determination of molybdenum in ores and lean concentra-
 tion products. E. H. Gerasimov and V. V. Polyakova. *Sbornik
 Nauch. Trudov Gosudarst. Nauch.-Issledovatel. Inst. Tsvet-
 nykh Metal.* 1955, No. 10, 410-16; *Referat. Zhur., Khim.*
 1956, Abstr. No. 4170.—Mo is detd. spectroanalytically
 by means of the line 3182.68 Å. In an a.-c. arc, with W as
 intermol. standard and $\text{Sn(NO}_3)_2$ or Na_2CO_3 as buffer sub-
 stance. The sample is introduced into the arc on a Cu
 movable plate.
 Alexis N. Pestoff

4E2C
 4E3D

N5 10

Author: B.V., inzhener; POLYAKOVA, V.Ie., inzhener.

Semiautomatic control and speed regulation of bucket movements
in shafts. Spetshtekhn. no. 6:20-22 Je '57. (MLRA 10:7)

1. Giproskhakhtostroy Mash.
(Shaft sinking) (Automatic control)

1. IONIAOVA, Ye. A.

2. USSR (600)

"Theoretical Foundations of Instruments for
Measuring the Visibility Range." Treudy GGO,
Issue 11, 1948 (41-72)

3. Meteorologiya i Gidrologiya
No. 3, 1949. ~~Report U-2051~~.
30 Oct 52

1. POLJAROVA, Ye. A.

2. USSR (600)

Review of Several Articles Published in the Latest Issue of
the "Transactions of the Academy of Sciences of the Kazakh SSR,"
No. 54, 1948.

3. Meteorologiya i Gidrologiya, No. 3, 1949.
Report U-2551, 30 Oct. 50.

POLYANOVA, Ye. A.

"Colors Contained in the Glow of the Early-Morning or Late-Night Sky", Iz ak
Nauk SSSR, Ser Geograf i Geofiz, Vol. 13, No. 2, pp 154-162, 1949.

POLYAKOVA, YE. A.

Raschet zorevykh okrasok (Calculation of Auroral Colors). Akademiya Nauk SSSR.
Izvestiay. Seriya geogr. i geofiz., 1949, v. 13, no. 3, p. 247-255, tables, diags.,
7 refs.

AS262.A6246 v 13.

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
POLYAKOVA, Ye A										JUL 1951									
AMS/A+B																			
2.7-100										551.521.63									
<p>Polyakova, E. A. Spectrographic observation of atmospheric transparency for solar ultraviolet radiation. [Spectrographic observation of atmospheric transparency for solar ultraviolet radiation.] Leningrad, Glushko Geophysical Observatory, Trudy, 19(81):185-192, 1950. 5 figs., 2 tables, 7 refs., equations. DiC—Observations made at different places in the U.S.S.R. at widely different latitudes, are used to determine characteristics of the atmosphere with respect to optical density of aerosols. The relation of such optical density to wave length from 3000 to 3600 Å at Pavlovsk, Sevastopol and Materska is shown graphically for different amounts of O₃. Subject Headings: Ultraviolet light, Atmospheric transparency, Ozone, U.S.S.R.—M.R.</p>																			
METALLURGICAL LITERATURE CLASSIFICATION										FROM DOMINO									
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LONDON 22										LONDON 22									
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POLYAKOVA, Ye.A.; SHIFRIN, K.S.

Microstructure and transparency of rain. Trudy GGO no. 42:84-96
'53. (MIRA 11:1)
(Rain and rainfall) (Atmospheric transparency)

POLYAKOVA, Ye.A.

Range of visibility in a rainfall zone. Meteor. i gidrol. no.8:23-26
'56. (MLRA 9:11)

(Visibility)

36-68-3/18

AUTHOR: Polyakova, Ye. A.

TITLE: Experimental Proof of the Formula for the Decrement
Coefficient of Light During Rain (Eksperimental'naya
proverka formuly dlya koeffitsiyenta oslableniya sveta
v dozhdde)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii
1957, Nr 68, pp. 88-91 (USSR)

ABSTRACT: The article summarizes results of testing rain drops as a
factor affecting light intensity and offers a mathematical
method of calculating the decrement. The tests were con-
ducted in 1953 - 1954 at Voyeykovo. The diminishing of
light during rain was measured by a special photoelectric
device called the transparency register of rain drops .
All treatment is mathematical. This is the first of three
articles on the subject. K.S. Shifrin is mentioned. There
are 2 diagrams, 1 table and 5 references, of which 4 are
USSR.

AVAILABLE: Library of Congress
Card 1/1

ПОЛЯКОВА, Е.А.

POLYAKOVA, Ye.A.

Study of rain microstructure in connection with transparency. Trudy
GGO no.68:92-97 '57. (MIRA 10:11)
(Atmospheric transparency) (Rain and rainfall)

304/50-58-6-23/24

AUTHOR: Polyakova, Ye. A.

TITLE: The Summary Meeting of the Scientific Council of the Geophysical Main Observatory imeni A. I. Voyeykov (Itogovaya sessiya uchenogo soveta Glavnoy geofizicheskoy observatorii im. A. I. Voyeykova)

PERIODICAL: Meteorologiya i gidrologiya, 1958, Nr 6, pp. 64 - 65 (USSR)

ABSTRACT: The subject meeting was held from January 27th to 31st. It dealt with the results obtained by the scientific research work carried out according to a plan. Seven informative communications were delivered in 10 sessions. Representatives of the scientific research institutions of the Hydrometeorological Service, of local administrations of this service, of the Institutes of the AS USSR, of the MGU and LGU, as well as of the scientific and operative institutions of other departments participated in the work of this meeting. On the first day problems of the dynamic meteorology were discussed, on the second day themes concerning forecasts. On the third day problems of the physics of clouds were discussed. On

Card 1/2

SOV/50-58-6-23/24

The Summary Meeting of the Scientific Council of the Geophysical Main Observatory imeni A. I. Voyeykov

January 30, reports were delivered on the investigation of fog. On the last day the meeting dealt with experimental work. Informative communications were delivered in the final session in the evening of the same day. Many reports were lively discussed. A high scientific level as well as the considerable activity of the participants are worth mentioning. The participants could make themselves acquainted with the work of the observatory basis at Voyeykovo.

1. Scientific reports--USSR
2. Meteorology
3. Hydrology

Card 2/2

POLYAKOVA, YE. A.

SOV/50-59-2-24/25

Khmaladze, G. B.

3(7)
AUTHOR:

Scientific Meeting at the Tbilisi Scientific Research Institute of Hydrometeorology (nauchnaya sessiya v Tbiliskom nauchno-isledovatel'skom gidrometeorologicheskom institute)

TITLE:

Meteorologiya i gidrologiya, 1959, Br 2, pp 70 - 71 (USSR)

PERIODICAL:

ABSTRACT:

In May 1958 the Tbilisskii nauchno-isledovatel'skii gidrometeorologicheskii institut (Tbilisi Hydrometeorological Scientific Research Institute) held a meeting at which the following representative participants took part: representatives of the Institute of Hydrometeorology (Central Forecasting Institute), G. B. Khmaladze, G. I. Chikvadze, G. I. Chikvadze (Main Geophysical Observatory), and the local administrations of the hydrometeorological services of the Transcaucasian Republics. On the occasion of the fifth anniversary of the Tbilisi NIIMI the director of the institute V. P. Kozlovskiy held a speech commemorating the event. Sh. P. Kozlovskiy (Tbilisi) spoke on the character of temperature distribution and the circulation of the atmosphere above the Antarctic. K. L. Gvishvili and Ye. A. Kozlovskiy spoke on the characteristics of the

Card 1/3

circulation processes above Transcaucasia. M. A. Zakharenko reported on the typification of synoptical processes carried out by him. E. A. Kozlovskiy read two papers on theoretical questions of dynamic meteorology. V. M. Gvishvili and V. P. Kozlovskiy spoke on the present state of the fight against hail. E. A. Kozlovskiy spoke on the great amount of precipitation on the coast of Georgia. K. L. Gvishvili reported on the meteorological conditions in the case of precipitation and fog. G. I. Chikvadze on the precipitation in Georgia in the course of 24 hours. E. V. Kozlovskiy on the wind energy reserves of Georgia. Sh. V. Kozlovskiy on the radiation and heat balances in the alpine zone of the Caucasus. Ye. A. Kozlovskiy on the radioactivity of the atmosphere in Tbilisi and Yusheti. Ye. A. Kozlovskiy on the albedo of different natural surfaces. Sh. G. Gvishvili (USSR of the Grusinskaya SSR) on the ground temperature conditions in Tbilisi. V. M. Kozlovskiy on the method developed by him for forecasting the number of days with ice melt. V. P. Kozlovskiy on a method for the calculation of the volume of rain

Card 2/3

supply in floods. V. P. Kozlovskiy (USSR of the Azerbaijan SSR) on the calculation of the atmospheric circulation in hydrological forecasting. V. M. Gvishvili on the characteristics of the formation of the water supply for spring floods on the rivers of Armenia. A. A. Kozlovskiy (USSR of the Arzyanskaya SSR) pointed to the special role of the snow cover of the belt between 1800 and 2400 m in the formation of the water supply for spring floods on the rivers of Armenia. V. P. Kozlovskiy spoke on the method of forecasting easily accessible humidity in the soil below grain cultures. M. P. Stolygin and Sh. I. Kozlovskiy spoke on the period set for the opening of the rivers in Transcaucasia. G. M. Kandelaki, L. A. Enfiladze (USSR of the Arzyanskaya SSR), and V. S. Chervynskiy spoke on the microclimatic conditions of the Lankhuti massif in the Arzyanskaya SSR. In all, 27 papers were read.

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POLYAKOVA, Ye.A.

Investigation of meteorological visibility during rainfalls.
Trudy GGO no.100:45-52 '60. (MIRA 13:6)
(Visibility) (Rain and rainfall)

POLYAKOVA, Ye.A.; TRET'YAKOV, V.D.

Investigation of meteorological visibility during snowfalls.
Trudy GGO no.100:53-57 '60. (MIRA 13:6)
(Visibility) (Snow)

S/050/61/000/005/003/003
D235/D301

AUTHOR: Polyakova, Ye.A.

TITLE: General session of the Scientific Council of the A.I.
Voyeykov Central Geophysical Observatory

PERIODICAL: Meteorologiya i gidrologiya, no. 5, 1961, 60-61

TEXT: The session of the Scientific Council devoted to the results of scientific research completed in 1960 took place on January 20-27, 1961, in the Glavnaya geofizicheskaya observatoriya (Central Geophysical Observatory (CGO)). At this session the staff of the CGO read 13 papers and 6 informative communications. In addition, in connection with the new duties bestowed on the CGO the reports of local scientific-research hydrometeorological institutes were given at the general session. This ended with a general meeting devoted to the work of Professor Ye.S. Rubinshteyn on the occasion of her 70th birthday and her 45 years of scientific activity. ✓

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General session of the ...

S/050/61/000/005/003/003
D235/D301

T.V. Pokrovskaya read a paper on the scientific biography of Ye.S. Rubinshteyn, who herself mentioned some results from her monograph on thermal regimes. Representatives of 68 organizations participated in the work of the general session, including those from institutes of the Academy of Sciences, scientific establishments and local branches of the Hydrometeorological Survey and the Moscow, Leningrad, L'vov, Latvian and other universities. On the first day of the meeting, after the opening address of the Director of the CGO -- M.I. Budyko, results were heard of two theoretical investigations, whose aim was the development of numerical methods of forecasting: "Numerical forecasting of the relative humidity and height of the lower cloud base" by M.Ye. Shvets, and "The study of the conditions of formation and dispersion of fog and the development of a method for their forecasting" by M.Ye. Berlyand. D.L. Laykhtman's paper "Theoretical development of criteria for turbulence hazards to aircraft in the upper half of the troposphere and lower part of the stratosphere" was heard on the second day. Noting

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General session of the ...

S/050/61/000/005/003/003
D235/D301

the high scientific level of this work, the Scientific Council recommended a wider verification of the results obtained by these experimental data. The next paper by Ye.M. Sal'man -- "Development of a method of radiolocational observations for the operational service of aviation" -- was devoted to a major experimental work. The author spoke of the possibilities which the meteorological utilization of a complex radar station could have for practical meteorology. The evening session on January 24 was devoted to two papers from the laboratory directed by Ye.S. Selezneva: "The investigation of the chemical composition of rainwater", and "Patterns of vertical distribution of condensed nuclei under different atmospheric conditions". Both these papers, as well as the one by G.P. Gushchin -- "Investigation of atmospheric ozone" (read the next day), are based on the data of network observations carried out during the IGY. The results of work at the CGO in the field of climatology were presented at the morning session on January 25. The main prognostic conclusion of the work of L.A. Vitel's from

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S/050/61/000/005/003/003
D235/D301

General session of the ...

the joint topic "Long-term climatic fluctuations and the change in the weather conditions in the European part of the USSR and Western Siberia" is the expected cooling of the climate in the next period of approximately 50 years. The paper presented by I.A. Gol'tsberg in the form of a monograph "Study of the microclimate of hilly terrain in different climatic environments of the USSR and its influence on the state of agriculture" was evaluated by the critics as a "fundamental work of much scientific and practical value". O.M. Chelpanova and V.Ya. Sharova presented maps of air-pressure and air-temperatures anomalies and the amount of rainfall in the Northern Hemisphere. On January 25, methodological research at the CGO was considered in a paper by V.A. Gavrilov -- "Determination of the inclined visibility range"; this was continued the next day in a paper by a group of authors headed by N. P. Rusin -- "Improvement of methods of meteorological observation", in another paper by N.V. Kucherov -- "Methods of wind measurement on board ship" and in information reports. Papers by I.Ye.

Card 4/5

General session of the ...

S/050/61/000/005/003/003
D235/D301

Buchinskiy (Ukr. NIGMI) -- "Climatic investigation of atmospheric drought in the Ukraine", by B.A. Ayzenshtat (SANIGMI) -- "Thermal balance of the basic landscapes of Central Asia" and by E.V. Sukhishvili (Tiflis NIGMI) -- "Distribution of the calculated wind velocities of Trans-Caucasia", were read on January 27. On February 6-8, after the general session of the Scientific Council, there was a conference of younger specialists and post-graduates of the CGO at the observatory when 16 scientific papers on problems of dynamic meteorology, radiation research, the chemistry of the atmosphere, climatology and other routine questions were read Ab-stractor's note: These papers are not mentioned here specifically⁷. ✓

Card 5/5

POLYAKOVA, Ye.A.

Annual Session of the Scientific Council of the Main Geophysical
Observatory. Meteor. i gidrol. no.4:72-73 Ap '62. (MIRA 15:5)
(Meteorological research)

BARTENEVA, O. D.; POLYAKOVA, Ye. A.

"Study of extinction and scattering of light in hazes, fogs and precipitations."

report presented at the Atmospheric Radiation Symp, Leningrad, 5-12 Aug 64.

BELOGUROV, Yu.A.; BELYAYEV, A.F.; VISHNEVSKIY, P.; ZAKHAROV, V.N.;
KAGANER, M.; MARGOLIN, L.M.; PASHKOV, Yu.S.; POLYAKOVA, Ye.A.
SMIRNOVA, S.I.

In the Main Administration of the Hydrometeorological Service.
Meteor. i gidrol. no.6:62 Je '64 (MIRA 17:8)

In the institutions of the Hydrometeorological Service. Ibid.:
63.

Meetings, conferences, seminars. Ibid.:63-64

Abroad. Ibid.:64.

L 37179-66 ENT(1)/FCC GW

ACC NR: AP6027807

SOURCE CODE: UR/0050/66/000/002/0019/0022

AUTHOR: Barteneva, O. D. (Candidate of physicomathematical sciences); Polyakova, Ye. A. (Candidate of physicomathematical sciences)

ORG: Main Geophysical Observatory, Moscow (Glavnaya geofizicheskaya observatoriya)

TITLE: Light equivalent of radiation

SOURCE: Meteorologiya i gidrologiya, no. 2, 1966, 19-22

TOPIC TAGS: solar radiation, atmospheric optic phenomenon, practical meteorology

ABSTRACT: The light equivalent of radiation is the ratio of the value of illumination in thousands of lux to the simultaneous value on the intensity of solar radiation in $\text{cal cm}^{-2}\text{min}^{-1}$. In this study an investigation was made to determine the possibility of using a constant value of the light equivalent for different points with different meteorological conditions: such as differences in the values of the light equivalent at stations over which the atmosphere is characterized by a higher or lower humidity, that is, differences in true absorption by water vapor and aerosols of different type. Such studies were made in the Pamirs in 1963 and near Leningrad in 1964; the meteorological parameters in the two areas were considerably different. This is the first time such a comparison has been made.

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UDC: 551.521

L 37179-66

ACC NR: AP6027807

Analysis of the data revealed that a single value of the light equivalent could be recommended for all geographical latitudes. This finding and the other relationships and data presented in the article can be used when computing the normal values of daytime illumination of a horizontal surface and compilation of maps of light climate on the basis of data from actinometric stations. However, the results cannot be used for solar altitudes of less than 5° above the horizon. Orig. art. has: 2 figures and 1 table. [JPRS]

SUB CODE: 03, 04 / SUBM DATE: 25May65 / ORIG REF: 004 / OTH REF: 004

Card 1/2 MLP

RASTENIA, S.D. (1940), Y.S.

Light equivalent of radiation under conditions of a dry atmosphere.
Total 600-601.9-3-40 165. (H. RA 1810)

KULIKOVA, G.I.; PALAGIN, E.G.; POLYAKOVA, Ye.A.; SALIMAN, Ye.M.

Possibility of radar determination of the meteorological limit
of visibility in clouds. Trudy CGO no.173:71-75 1965.
(MIRA 18:3)

BARTENEVA, O.D.; POLYAKOVA, Ye.A.

Study of the attenuation and scattering of light in natural fog due to its microphysical properties. Izv. AN SSSR. Fiz. atm. i okeana 1 no.2:193-207 F '65.

(MIRA 18:5)

1. Glavnaya geofizicheskaya observatoriya imeni Voyeykova.

L 52727-65 FSS-2/EWT(1)/EWG(v)/FCC/EEC(t)/EED-2 Pm-4/Pn-4/Pe-5/Pac-4/
 P1-4/Pj-4/Pk-4/P1-4 RB/GN/VR
 UR/2531/65/000/173/0071/0075
 ACCESSION NR: AT5012363

AUTHOR: Kulikova, G. I.; Palagin, E. G.; Polyakova, Ye. A.; Sal'man, Ye. M. (can-
 didate of physico-mathematical sciences)

TITLE: The feasibility of radar determination of meteorological visibility in fogs

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 173,
 1965. Voprosy radiometeorologii (Problems in radiometeorology), 71-75

TOPIC TAGS: fog visibility, fog water content, fog transparency, fog reflectance,
 meteorological radar, drop size

ABSTRACT: The authors investigated the applicability of radar to the measurement
 of meteorological visibility in fog. The feasibility of fog observation at
 short distances (1-5 km) is established, and, on the basis of special microphysical
 investigations of various types of fog occurring over Vayekova in the July-October
 period of 1961, tables and figures are given presenting the correlations 1) between the
 water content, transparency coefficient, reflectance, and meteorological visibility,
 distance; and 2) between the visibility (in arbitrary units) and the fog reflec-
 tance (in mm^6/m^3). The authors emphasize, however, that for the practical
 realization of radar visibility measurements in fog, one would have to design better
 meteorological radar equipment and carry out more precise measurements relating the

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L 52727-65

ACCESSION NR: AT5012363

radar and optical characteristics of fog. Orig. art. has: 7 formulas, 2 figures,
and 2 tables. [08]

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical
Observatory)

SUBMITTED: 00

ENCL: 00

SUB CODE: ES, Dc

NO REF SOV: 003

OTHER: 000

ATD PRESS: 4011

282
Card 2/2

L 52553-65 EWT(1)/EWG(v)/FCC/EEC(t) Pe-5/P1-4 GW

ACCESSION NR: AP5009236

UR/0362/65/001/002/0193/0207

AUTHOR: Barteneva, O. D., Polyakova, Ye. A.

TITLE: A study of the attenuation and scattering of light in natural fog due to its micro-physical properties

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 1, no. 2, 1965, 193-207

TOPIC TAGS: fog light attenuation, fog light scattering, fog microphysical property, fog transparency, fog water content, scattering indicatrix

ABSTRACT: The study of the optical properties of fog involves the study of the optical properties of both individual fog particles and the turbid medium as a whole. A basic difficulty in the theoretical calculation of the optical properties of fog is due to the absence of data on the spectra of droplet dimensions. To fill the fog information gap, measurements of the attenuation coefficient, scattering indicatrix, and microstructure of natural fog were carried out at Tsey (Caucasus) and Voyeykovo (Leningrad oblast) during 1961-1962. On the basis of data from these simultaneous optical and microphysical measurements the authors established correlation relationships between the transparency and the water content of fog. The feasibility of the calculation of the fog microstructural parameters from

Cord 1/2

L 52553-65

ACCESSION NR: AP5009236

these two integral characteristics is shown, and the scattering indicatrix in fog and dense haze is calculated. The classification of some newly obtained indicatrices according to shape is related to the microphysical characteristics of fog and to the previously proposed classifications (O. D. Barteneva, Izv. AN SSSR, ser. geofiz., no. 12, 1960; W. D. Chesterman, W. S. Stils, Symposium on searchlights, Illum. Eng. Soc. London, 1948) for all transparency values. "A. N. Boyarova, T. F. Selezneva, N. M. Gorb, L. A. Smovzh, and B. N. Fedorov participated in the investigation. The authors thank L. M. Levin and S. L. Sarkisov for their help and advice during the organization of the microphysical measurements. Orig. art. has: 6 formulas, 5 figures, and 3 tables.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya im. A. I. Voyeykova (Main Geophysical Observatory)

SUBMITTED: 13Feb64

ENCL: 00

SUB CODE: ES, OP

NO REF SOV: 024

OTHER: 007

2/2

MIKHAYLOV, N.P.; POLYAKOVA, Ye.D.

Incorrectly isolated type of diamond primary deposits. Sov. geol.
2 no.6:134-135 Je '59. (MIRA 12:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskii institut
(VSEGEI).

(Diamonds)

POLYAKOVA, YF. G.

POLYAKOVA, YF. G.: "A hygienic evaluation of various types of water supply under the conditions of the populated agricultural localities of Saratov Oblast." Saratov, 1955. Min Health RSFSR. Saratov State Medical Inst. (Dissertation for the Degree of Candidate of Medical Sciences)

SG: Knizhnaya Letopis' No. 47, 19 November 1955. Moscow.

SOKOLOV, V.L.; BUSH, E.A.; KRICHEVSKIY, G.N.; MEDVEDEV, N.F.; POLYAKOVA, Ye.G.

Structure of the subsalt Paleozoic in the Caspian Lowland, Dokl. AN
SSSR 162 no.6:1370-1373 Je '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza.
Submitted April 3, 1964.

POLYAKOVA, Yelena Genrikhovna

Hygienical (otsenka) of Different Types of Water Sources in Conditions
of Rural Population Localities of the Saratov Region

Dissertation for candidate of a Medical Science degree. Saratov Sanitation-
Hygiene Institute, 1956